

## **REMARKS**

Applicant appreciates the Office's review of the present application. In response to the Office Action, the cited references have been reviewed, and the rejections and objections made to the claims by the Examiner have been considered. The claims presently on file in the present application are believed to be patentably distinguishable over the cited references, and therefore allowance of these claims is earnestly solicited.

In order to render the claims more clear and definite, and to emphasize the patentable novelty thereof, claims 1, 7, 17, 29, 36-38, 40, and 42 have been amended, claims 27-28 have been cancelled without prejudice, and new claim 44 has been added. Support for any new claims is found in the specification, claims, and drawings as originally filed, and no new matter has been added. Accordingly, all claims presently on file in the subject application are in condition for immediate allowance, and such action is respectfully requested.

### **Rejections**

#### **Rejection Under 35USC Section 101**

Claims 36-37 have been rejected under 35 USC Section 101 as being directed to non-statutory subject matter.

In response, claims 36-37 have been amended to recite the statutory subject matter of a computer-readable medium.

In view of the foregoing, it is submitted that the rejections under 35 USC Section 101 have been overcome and should be withdrawn. It is believed that amended claim 37, which was not otherwise rejected, is now allowable based on the similarity of its limitations to allowed claim 19.

#### **Rejection Under 35USC Section 112 Second Paragraph**

Claim 42 has been rejected under 35 USC Section 112, subparagraph 2, as being indefinite for failing to particularly point and distinctly claim the subject matter which the Applicant regards as the invention.

In response, claim 42 has been amended to refer to the previously-recited distortion compensator.

In view of the foregoing, it is submitted that the rejection under 35 USC Section 112, paragraph 2, has been overcome and should be withdrawn.

Rejection Under 35USC Section 102(b)

Claims 1, 2, 17, 38, 40, and 42 have been rejected under 35 USC Section 102(b), as being anticipated by U.S. patent 4,776,013 to Kafri et al. ("Kafri"). Applicants respectfully traverse the rejection and request reconsideration based on the amendment to claims 1, 17, 38, 40, and 42 and features in the other claims which are neither disclosed nor suggested in the cited reference.

As to a rejection under 102(b), "[a]nticipation is established only when a single prior art reference discloses expressly or under the principles of inherence, each and every element of the claimed invention." RCA Corp. v. Applied Digital Data Systems, Inc., (1984, CAFC) 221 U.S.P.Q. 385. The standard for lack of novelty, that is for "anticipation," is one of strict identity. To anticipate a claim, a patent or a single prior art reference must contain all of the essential elements of the particular claims. Schroeder v. Owens-Corning Fiberglass Corp., 514 F.2d 901, 185 U.S.P.Q. 723 (9th Cir. 1975); and Cool-Fin Elecs. Corp. v. International Elec. Research Corp., 491 F.2d 660, 180 U.S.P.Q. 481 (9th Cir. 1974). The identical invention must be shown in as complete detail as is contained in the claim. Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim. In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Independent claim 1, and its dependent claim 2, are patentably distinguishable over the

cited reference because claim 1 emphasizes the novel features of the present invention in which at least one of the encoding parameters used to encode data is included in the encoded image. In this regard, claim 1 recites:

“1. (Currently amended) A method of encoding binary data for transmission over an image data channel, comprising:  
 defining encoding parameters adapted for encoding the binary data in such a manner that a transformed linear matrix image produced by transmitting an encoded linear matrix image over the image data channel is reconstructable into the encoded linear matrix image; and  
 encoding the binary data into the encoded linear matrix image according to the encoding parameters, the encoded linear matrix image including at least one of the encoding parameters.”  
 (emphasis added)

The Kafri reference discloses encoding in which the encoded parameters are not included in the encoded image. The encoding step 12 of the Kafri reference uses a master grid 14 to encode the data into encoded data grid 16 before transmission, and the decoding step 22 uses master grid 24 to decode the data in encoded data grid 26 after reception (Figs. 1,2; col. 2, line 60 – col. 3, line 2). The Office states that the encoding parameters are inherent in the master grid (Office Action, p.3). Assuming arguendo that this is correct, the master grid 14 or a portion thereof is not included in the encoded data grid 16, but separate from it. As is described in the Kafri reference:

“Preferably, the master grids 14 and 24 are in the form of a ROM (Read Only Memory) storing the master matrix of pixels and used in the above-described encoding step 12 and decoding step 22, respectively; alternatively, the master grid used in the decoding could be in the form of a transparency superimposed over the encoded image” (col. 3, lines 28-34).

“Encoder 48 utilizes both the image matrix and master matrix to produce an encoded grid (16, FIG. 1) according to the specific algorithm selected for encryption ... The encoded grid is then transmitted by transmitter 50, and is received by receiver 52. The master grid, if stored in memory, is used in the decoding; but if in the form of a transparency, it is superimposed over the encoded grid in decoder 54, to produce the decoded grid” (col. 3, lines 50-58).

Significantly, the Kafri reference says nothing about including in the encoded data grid 16 the master grid 14 that is used to encode the data.

The novel features of the present invention are not anticipated by the Kafri reference in that the element of the encoded linear matrix image including at least one of the encoding

parameters is absent from the Kafri reference. Therefore, the rejection is improper at least for that reason and should be withdrawn.

Independent claims 38 and 40, as currently amended, each contain limitations similar to those in amended claim 1, and are not anticipated by the Kafri reference for the same reasons as discussed heretofore for claim 1. Therefore, the rejection is improper at least for that reason and should be withdrawn.

Independent claim 17 is patentably distinguishable over the cited reference because claim 17 emphasizes the novel features of the present invention in which the encoding parameters used to encode data are included in the encoded image. In this regard, claim 17 recites:

“17. (Currently amended) A method of encoding binary data for transmission over an image data channel, comprising:  
encoding the binary data into a linear matrix image having image attributes which ensure that a transformed linear matrix image produced after the transmission over the image data channel is decodable using at least one encoding parameter included in the linear matrix image so as to reconstruct the binary data from the transformed linear matrix image; and  
electronically storing the linear matrix image as an image file.” (emphasis added)

As discussed heretofore with reference to claim 1, the Kafri reference does not include any portion of the master grid 14 in the encoded data grid 16, and requires a master grid 24 that is separate from the received encoded data grid 26 in order to decode and reconstruct the binary data.

The novel features of the present invention are not anticipated by the Kafri reference in that the limitation of at least one of the encoding parameters included in the linear matrix image is absent from the Kafri reference. Therefore, the rejection is improper at least for that reason and should be withdrawn.

Independent claim 42 is patentably distinguishable over the cited reference because

claim 42 emphasizes the novel features of the present invention in which the encoding parameters used to encode data are included in the encoded image. In this regard, claim 42 recites:

“42. (Currently amended) An apparatus for encoding binary data for transmission over an image-transforming channel, comprising:

a distortion compensator which defines encoding parameters adapted for encoding the binary data in such a manner that a transformed matrix image produced by transmitting an encoded linear matrix image is reconstructable into the encoded linear matrix image; and

a linear matrix encoder communicatively coupled to the distortion compensator which encodes the binary data into the encoded linear matrix image according to the encoding parameters, the encoded linear matrix image including the encoding parameters.” (emphasis added)

As discussed heretofore with reference to claim 1, the Kafri reference does not include any portion of the master grid 14 in the encoded data grid 16, and requires a master grid 24 that is separate from the received encoded data grid 26 in order to decode and reconstruct the binary data.

The novel features of the present invention are not anticipated by the Kafri reference in that the limitation of the encoded linear matrix image including the encoding parameters is absent from the Kafri reference. Therefore, the rejection is improper at least for that reason and should be withdrawn.

#### Rejection Under 35USC Section 103

Claims 3 and 36 have been rejected under 35 USC Section 103(a), as being unpatentable over U.S. patent 4,776,013 to Kafri et al. ("Kafri"). Applicants respectfully traverse the rejection and request reconsideration based on the amendment to claim 36 and features in the claims which are neither disclosed nor suggested in the cited reference.

Independent claim 36, as currently amended, recites limitations similar to those in amended claim 1. These limitations are not disclosed or suggested by the Kafri reference for the same reasons as discussed heretofore for claim 1. Therefore, the rejection is improper at least for

that reason and should be withdrawn.

With regard to claim 3, Applicant respectfully traverses the rejection and requests reconsideration based on the dependence of this claim on independent claim 1, whose reasons for allowability over the Kafri reference have been discussed heretofore.

### **Formalities**

#### **Allowable Subject Matter**

Applicant acknowledges, with appreciation, the allowance of claims 18-26, 31-35, 39, 41, and 43.

Claims 4-16, 29, and 30 have been objected to as being dependent upon a rejected base claim and have been indicated as being allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

Applicant has rewritten allowable claim 7 in independent form to include all of the limitations of the base claim (claim 1) and any intervening claims (none). As rewritten claim 7 is now believed to be in allowable form, claims 8-16 that depend directly or indirectly from independent claim 7 are allowable in dependent form.

Applicant has rewritten allowable claim 29 in independent form to include all of the limitations of the base claim (claim 27) and any intervening claims (claim 28). As rewritten claim 29 is now believed to be in allowable form, claim 30 that depends from independent claim 29 is allowable in dependent form.

Applicant has not rewritten claims 4-6 in independent form at this time. Applicant believes that claims 4-6 are allowable based on their dependence from amended claim 1. Applicant reserves the right to rewrite claims 4-6 in independent form at a future time.

Accordingly, Applicant respectfully requests that the objection to claim 4-16, 29, and 30 be withdrawn and that these claims be deemed allowed.

Comments on Statement of Reasons for Allowance

Applicant agrees with the Office's conclusion regarding patentability, without necessarily agreeing with or acquiescing in the reasons set forth in the Office Action. In particular, applicant wishes to emphasize that the patentability of claims stems from the respective combinations of elements defined by the claims, each viewed as a whole, rather than the presence of any particular element(s) in the combinations. Applicant submits that the indicated claims are allowable because the prior art fails to anticipate, teach, suggest, or render obvious the invention as claimed, independent of how the invention is paraphrased. Applicant thus relies on the claims, as drafted, rather than any characterization in the Office Action.

Conclusion

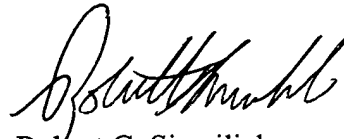
Attorney for Applicant has carefully reviewed each one of the cited references made of record and not relied upon, and believes that the claims presently on file in the subject application patentably distinguish thereover, either taken alone or in combination with one another.

Therefore, all claims presently on file in the subject application are in condition for immediate allowance, and such action is respectfully requested. If it is felt for any reason that direct communication with Applicant's attorney would serve to advance prosecution of this case to finality, the Examiner is invited to call the undersigned Robert C. Sismilich, Esq. at the below-listed telephone number.

**AUTHORIZATION TO PAY AND PETITION  
FOR THE ACCEPTANCE OF ANY NECESSARY FEES**

If any charges or fees must be paid in connection with the foregoing communication (including but not limited to the payment of an extension fee or issue fees), or if any overpayment is to be refunded in connection with the above-identified application, any such charges or fees, or any such overpayment, may be respectively paid out of, or into, the Deposit Account No. 08-2025 of Hewlett-Packard Company. If any such payment also requires Petition or Extension Request, please construe this authorization to pay as the necessary Petition or Request which is required to accompany the payment.

Respectfully submitted,



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